

9-9-1993

Washington University Record, September 9, 1993

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Recommended Citation

"Washington University Record, September 9, 1993" (1993). *Washington University Record*. Book 627.
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Streams of people flocked to the Alumni House last week for tickets to hear the 14th Dalai Lama of Tibet, His Holiness Tenzin Gyatso, deliver an Assembly Series lecture. His talk, "Altruism and World Affairs," was scheduled for Sept. 7 in the Field House. About 1,000 tickets were distributed to the general public.

Students give expanded shuttle service 'thumbs-up'

Senior Robin Ketcham describes Washington University's expanded shuttle system in one word: "T-E-R-R-I-F-I-C!"

Ketcham, a residence hall adviser (RA) for the second floor of Washington Hall, is particularly ecstatic about the increased frequency of the Washington Hall shuttle, which transports his freshman residents from the hall to several central locales, such as Mallinckrodt Center and Brookings Hall. Previously, the shuttle ran each hour beginning at 9:40 a.m. Now, students hurrying to classes may catch the shuttle every 30 minutes beginning at 10 a.m.

Ketcham, a mechanical engineering major from Avon, Conn., also applauds the Transportation Department's decision to establish a Super Saturday Shuttle and extend routes, allowing students to take advantage of St. Louis' various cultural and entertainment activities, as well as do their grocery shopping.

By using the Super Saturday Shuttle, which began operating hourly from 1 p.m. to 1 a.m. on Sept. 4, residents can catch the shuttle at Wohl Center and travel to downtown Clayton, the Galleria shopping mall, the Delmar Loop and the MetroLink's Forest Park station, which is located at the intersection of Pershing and DeBaliviere. MetroLink is the city's new light-rail transit system.

"The shuttle gives students a tie into virtually everything in the city of St. Louis," says Gary Sparks, director of the Transportation Department, who received a standing ovation when he presented the shuttle improvements to the RAs. "This is the first time we have ever had weekend shuttle service." Although the Saturday shuttle is primarily designed for students living in the residence halls, anyone can ride it, he says.

Ketcham says students are happy about having access to the MetroLink stations because it enables them to visit popular downtown spots like Union Station, Laclede's Landing and Busch Stadium. As part of the route changes, students may travel to the sites downtown by catching a medical school shuttle to the MetroLink station at the corner of Pershing and DeBaliviere. Individuals also may use the medical school shuttle to travel to MetroLink's Central West End station at Euclid and Scott.

Sparks says each medical school shuttle includes trips near the two MetroLink stations. From 7:35 a.m. to 6:20 p.m., riders may still take the shuttle every 20 minutes from major sites on the Hilltop and Medical campuses.

"In the past, the medical school shuttle has made two trips through the Pershing/DeBaliviere area in the morning and two in the afternoon," Sparks says. "After 10 a.m., the route was encompassed by the Washington Hall/DeBaliviere shuttle, which ran once every hour. Since we now have a separate Washington Hall shuttle, the medical school shuttle travels through the Pershing/DeBaliviere area every 20 minutes. What all this means is that by simply changing routes, the DeBaliviere area residents get three times the service they had before and Washington Hall residents get twice the service they had before."

The expanded route for the medical shuttle also helps staff members who want to use the MetroLink to come to work, Sparks says. Individuals can catch the MetroLink near their homes and catch the medical school shuttle at Pershing and DeBaliviere every 20 minutes, he says.

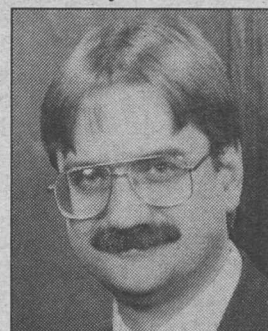
In other changes:
• Evening shuttle service to the Delmar Loop/Lewis Center, Clayton/DeMun and

Continued on page 6

Taylor receives award for skin cancer research

John-Stephen Taylor, Ph.D., associate professor of chemistry, has been awarded a special five-year award from the National Cancer Institute (NCI) for his research into the links between sunlight and skin cancer. The NCI is a division of the National Institutes of Health (NIH).

The Method to Extend Research in Time (MERIT) award provides Taylor and his colleagues \$1.3 million over five years. The special feature of the MERIT award is its automatic renewal each year, sparing the researcher from writing frequent renewal applications. At the end of the initial five-year MERIT award term, Taylor will be eligible to extend the award an additional three to five years.



John-Stephen Taylor

The NIH chooses recipients for MERIT status based on the superior competence and outstanding productivity of applicants in their previous research. Begun in July 1986, the awards are issued to only a select few researchers nationwide each year. According to the NIH, the MERIT award objective is "to provide long-term stable support to investigators whose research competence and productivity are distinctly superior and who are likely to continue to perform in an outstanding manner."

Taylor came to Washington University as assistant professor of chemistry in 1983. His key research emphasis has been molecular studies of sunlight-induced mutations in DNA. In 1986, Taylor and his researchers discovered a new photoproduct (damaged DNA) caused by sunlight. In 1993, Taylor proposed a new model for how genetic mutations occur in sunlight-damaged DNA. A synthetic organic chemist, Taylor is one of very few researchers worldwide to synthetically create sunlight-damaged DNA and study its activity in living systems, primarily bacteria. His next research goal is to study sunlight-damaged DNA inside human cells.

Conductor Leonard Slatkin to lecture

Leonard Slatkin, music director and conductor of the Saint Louis Symphony Orchestra, will speak at 4 p.m. Tuesday, Sept. 14, in Graham Chapel. His lecture, part of the Assembly Series, is free and open to the public.

Slatkin, who has led the St. Louis Symphony Orchestra (SLSO) to world prominence during his 14 seasons as music director, is celebrating his 25th anniversary as SLSO conductor. Earlier this year he received the Laurel Leaf award from the American Composers Alliance and was named an honorary member of the Royal Academy of Music.



Leonard Slatkin

During Slatkin's tenure in St. Louis, the orchestra, which performs semiannually in Carnegie Hall, has made numerous tours, including three highly acclaimed overseas tours — Europe in 1985 and the Far East in 1986 and 1990.

Since 1978 Slatkin's recordings with the SLSO have been nominated yearly for Grammy awards, winning two in 1985 and one in 1992. In 1989 he signed an exclusive, five-year contract with BMG Classics, an international company that includes RCA Victor Red Seal, Eurodisc and Deutsche Harmonia Mundi. The agreement, the most comprehensive and extensive in the classical recording industry today, calls for a total of 40 discs — 30 with the SLSO and 10 with orchestras in Europe.

Throughout his career Slatkin has been recognized internationally for his diverse abilities not only as a masterful interpreter of the standard repertory but also as a champion of new works. His guest appearances over the last two decades include symphony orchestras in cities from Boston to Los Angeles and from London to Berlin. During the 1990-91 season he conducted the New York Philharmonic in its memorial concert for Leonard Bernstein and the Chicago Symphony in its centennial gala celebration concert. He has received numerous honorary doctorates, including one from his alma mater, the Juilliard School.

For more information, call 935-4620.

In This Issue...

Fighting cholesterol: New test safely measures intestinal cholesterol absorption *Page 2*

Developing an art form: Joan Hall has stepped outside the traditional boundaries of printmaking and created works all her own *Page 3*

Accepting the challenge: MBA students build team cooperation through outdoor educational adventure *Page 6*

Medical Update

New test is powerful weapon in fight against high cholesterol

Researchers at the School of Medicine have developed a much-needed test that removes a major obstacle in understanding the cause of high cholesterol levels.

The test measures percent cholesterol absorption from the intestine. It will lead to new insights into the role of dietary cholesterol and blood cholesterol levels and will help zero in on better ways to control high cholesterol, say its developers. They published clinical results using the test in the June issue of the *Journal of Lipid Research*.

"This opens up a new area of research that will let us answer fundamental questions about cholesterol metabolism that were not approachable before," says Richard E. Ostlund Jr., M.D., associate professor of medicine and co-author of the study.

Cholesterol is a fatty substance that the body uses to build hormones and cell membranes. In excess, it is known as a risk factor for cardiovascular disease. Until now, most cholesterol studies have focused on measuring cholesterol levels in the blood. But blood levels are not a fail-safe indicator of health. The real issue, the researchers say, is how much cholesterol is in the body.

"You can have a low plasma cholesterol level and still have a large amount of cholesterol in your body. So in some cases, blood cholesterol levels may not tell the whole story and, in fact, may be very misleading," Ostlund explains.

This hidden cholesterol reserve can cause health problems that are not reflected by blood tests, says Matthew S. Bosner, M.D., assistant professor of medicine and lead author of the study. "Half the people who have heart attacks have 'normal' blood cholesterol levels. But when you look at their heart and arteries by X-ray or autopsy, they will commonly have atherosclerosis."

Researchers have been anxious to study intestinal cholesterol absorption because this process is a key to controlling how much cholesterol is in our bodies, Ostlund says. The intestine acts as one of the body's cholesterol gatekeepers, exerting its control in two ways: First, some of the cholesterol we eat is absorbed into the body through the intestine. Second, the body gets rid of some internally produced cholesterol by dumping it into the intestine, and a portion of that is reabsorbed. Being able to measure the rate of absorption is the first step toward understanding this cycle in detail and toward learning how to control it, Ostlund says.

Although it has been possible to measure intestinal absorption in the past, such studies have been limited. Until now, the only available method used radioactive materials, so researchers have been hesitant to study women and children. Studies have focused almost entirely on middle-aged men with heart disease, yielding information that might not apply to the rest of the population, says Bosner.

For their new absorption test, the investigators used two synthetic, nonradioactive forms of cholesterol — one labeled with a

rare form of carbon, the other labeled with a rare form of hydrogen. They studied 16 volunteers, seven women and nine men, ages 21 through 63. Each participant received one type of the cholesterol as part of a meal and received the other type of cholesterol in an injection. After three days, the investigators took blood samples and measured the labeled cholesterol with a technique called gas chromatography-mass spectrometry. From those values, they calculated the percentage of ingested cholesterol that reached the bloodstream. Absorption ranged from 37 to 70 percent, he says.

The test will help patients find the best way to control their cholesterol, Bosner says. For example, a person who absorbs a

small percentage of dietary cholesterol might not respond significantly to changes in diet. However, someone who absorbs most of the cholesterol he or she eats would benefit by following a very strict diet. Currently, the test is not available outside of Washington University, Bosner says. The researchers are looking for ways to simplify it for widespread use in physicians' offices.

The test's biggest value right now will be for research, says Ostlund. Because the new test is safe, researchers will be able to study cholesterol absorption in the whole population for the first time to ask important basic questions such as: What makes someone a high absorber? Will changes in

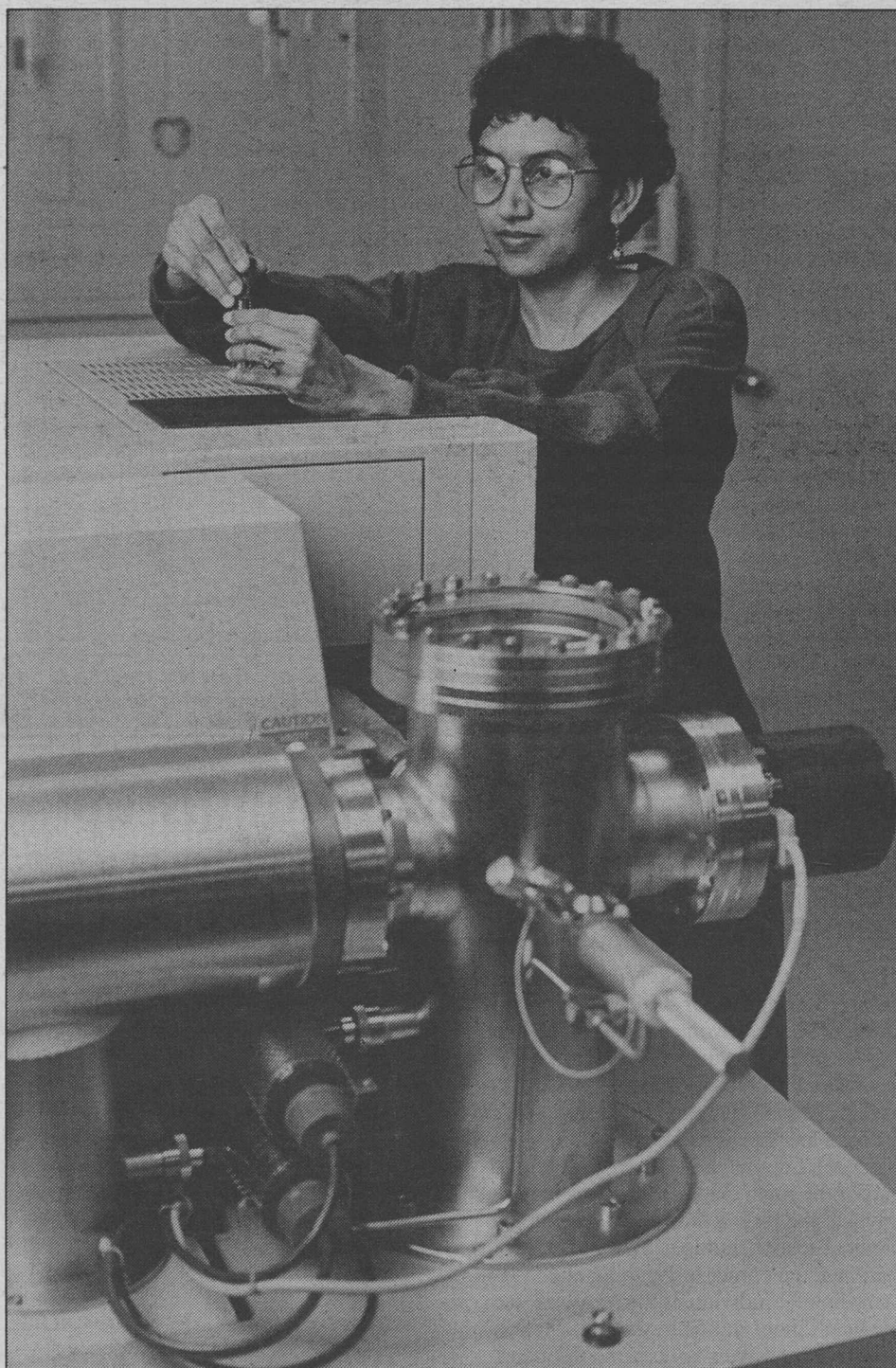
diet affect a person's absorption rate? What role does cholesterol absorption rate play in causing heart disease in high-risk groups such as diabetic women? What are the genetics of cholesterol absorption?

In addition, the test will help uncover details about what happens to cholesterol once it is inside the body, Ostlund says. Because the cholesterol tracers are safe, they can be used repeatedly in the same patients. Such studies could track the path cholesterol takes through the body and determine how quickly it leaves the body, he says.

The test also could be an important screening tool to evaluate the effectiveness of new drugs aimed at blocking absorption, Ostlund says. There are no drugs currently available that have a substantial effect by directly limiting cholesterol absorption. Drugs that block cholesterol absorption could provide a more direct and potent method to deplete body cholesterol, he says.

The researchers have received a three-year \$130,000 grant from the American Heart Association for the project.

— Juli Leistner



Shobhna Mehta, a medical research technician in Dr. Ostlund's laboratory, injects a blood sample into the mass spectrometer at the School of Medicine's Mass Spectrometry Resource.

Three students receive research fellowships

Three School of Medicine students have received research training fellowships from the Howard Hughes Medical Institute. These fellowships, in the amount of \$23,200 each, will allow the students to spend a year doing basic medical research full time in laboratories of their choice.

Rose Baghdady received a fellowship to do neuroscience and physiology research under the direction of Colin G. Nichols, Ph.D. Griffith E. Liang also will study neuroscience and physiology, but under the direction of Thomas A. Woolsey, M.D.

Kevin Korenblat will use his fellowship to study genetics and molecular biology in the laboratory of Alison M. Goate, Ph.D.

Record

Executive Director,
University Communications: Judith Jasper
Executive Editor: Susan Killenberg
Editor: Deborah Parker, 935-5235, Box 1070
Editor, Medical news: Diane Duke, 362-9662, Medical School Box 8065
Assistant Editor: Carolyn Sanford, 935-5293, Box 1070

Contributing writers: Caroline Decker, Jim Dryden, Gerry Everding, Tony Fitzpatrick, Nancy Galofre, Jim Keeley, Rozanne Kennedy, Juli Leistner, Dave Moessner, Joni Westerhouse and Mike Wolf

Photographers: Joe Angeles, Tom Heine, David Kilper and Herb Weitman

Production: Galen Harrison

Record (USPS 600-430; ISSN 1043-0520), Volume 18, Number 3/Sept. 9, 1993. Published for the faculty, staff and friends of Washington University. Produced weekly during the school year, except school holidays, and monthly during June, July and August by the Office of Public Affairs, Washington University, Campus Box 1070, One Brookings Drive, St. Louis, Mo. 63130. Second-class postage paid at St. Louis, Mo.

Address changes and corrections:

Postmaster and non-employees: Send address changes to *Record*, Washington University, Campus Box 1070, One Brookings Drive, St. Louis, Mo. 63130.

Hilltop Campus employees: Send to Office of Human Resources, Washington University, Campus Box 1184, One Brookings Drive, St. Louis, Mo. 63130.

Medical Campus Employees: Send to Payroll Office, Washington University, Campus Box 8017, 660 S. Euclid, St. Louis, Mo. 63110.

 **Washington**
WASHINGTON UNIVERSITY IN ST. LOUIS

Majerus heads finance in Department of Medicine

Philip Majerus, M.D., has been named vice chairman for financial affairs, a new post in the Department of Medicine at the School of Medicine.

The appointment was announced by John P. Atkinson, M.D., professor and chairman of the Department of Medicine. Majerus, professor of medicine and of biochemistry and molecular biophysics, will be responsible for budgetary planning, resource utilization and overseeing the business office of the department.

Majerus came to the School of Medicine in 1966 as an assistant professor of medicine and biochemistry. He became a professor of medicine in 1971 and professor of biochemistry in 1976. Since 1973, he has been co-director of the Department of Medicine's Division of Hematology-Oncology.

He is well known nationally for his

research on how blood cells respond to environmental signals, specifically in the area of blood clotting. The widely accepted practice of taking low doses of aspirin on a regular basis to reduce the possibility of heart attacks is based on his work. Majerus' current research focuses on a natural anticoagulant called thrombomodulin and on a family of enzymes and metabolites that are involved in generating chemical messages related to cell growth, movement and other vital cell activities. His lab has discovered several new enzymes in this family and is now investigating their functions.

Majerus also is active outside of Washington University. He is a member of the National Academy of Sciences, the Institute of Medicine, the American College of Physicians, Sigma Xi and several other organizations. He is a past

president of the American Society of Hematology and of the American Society for Clinical Investigation and is chairman of the National Heart, Lung and Blood Institute's Board of Scientific Counselors. In addition, he has served on the editorial boards of several medical journals, including the *Proceedings of the National Academy of Sciences* and the *Journal of Biological Chemistry*.

Majerus was named a fellow of the American Association for the Advancement of Science in 1987 and a fellow of the National Academy of Arts and Sciences in 1988. He was honored with the Distinguished Career Award from the International Society for Thrombosis and Hemostasis in 1985.

He received his bachelor's degree from Notre Dame University in 1958 and his medical degree from Washington University in 1961.

Washington People

Printmaker Joan Hall makes her mark

It's a good thing Joan Hall, associate professor of printmaking, received a scholarship to study art at the Columbus College of Art and Design (CCAD) in Ohio in the early 1970s. Otherwise, the world might still be waiting for someone to produce artworks that combine printmaking, papermaking and sculpture in the unique way she has developed.

"When I decided to go to college, I was either going to study foreign languages or art. If I hadn't received a scholarship to art school, I probably would have gone off somewhere to study foreign languages," says Hall. "It was a 50-50 chance."

Her early interests in art school — advertising and commercial art — didn't give any clue that Hall would become an innovator in the field of printmaking.

"I soon realized that I really didn't like drawing things the way I saw them," she says. "It didn't take long before I switched over to fine arts, where I had the freedom to interpret images in an abstract manner."

When she made the switch to fine arts, Hall became interested in printmaking and ceramics because she liked the indirect techniques used in both. "The indirect technique is very different from something like painting, in which you can see results right in front of you," she explains. "In printmaking, you make a plate, print it, and when it comes off the press, you have a design puzzle that you work to solve. I think ceramics is somewhat the same in that you make a vessel and glaze it to complement the form you've made."

After receiving a bachelor's degree in fine arts from CCAD in 1974, Hall pursued a master's degree in printmaking at the University of Nebraska, Lincoln (UNL). During a 1977 break from her studies at UNL to attend the Institute of Experimental Printmaking in San Francisco, Hall learned how to make paper. She didn't realize it at the time, but her knowledge of papermaking would become the catalyst to distinguish her printmaking. Today, papermaking continues to be an important element of Hall's art.

Making her own paper has allowed Hall to step outside the boundaries of traditional printmaking, in which colors are layered over one another onto white paper. "Working in the traditional method left me very frustrated because the paper got so saturated with color that things got muddy looking. When I made my own paper, I pigmented it so I could start with colors where I wanted them, and the paper was still absorbent enough to accept ink from the printmaking press."

Papermaking also helped Hall break another rule of printmaking (imposed in the early 1970s) — that to be a print, the form must be a rectangle. "I've always been interested in free-form shapes and work that is not bound by a rectangle. By making my own paper, I'm able to form the shapes I want, making them as big and as thick as I want," she says. "Paper is much like clay; it starts out wet but dries rigid so you can print on it or manipulate it in other ways. I found that controlling the paper allowed me to introduce sculpture and ceramics and give printmaking the qualities of texture and dimension."

It may all sound elementary, but developing a technique has meant years of experimentation for Hall. Over the years, she has continually shrugged off criticism from those reluctant to recognize her art as printmaking. Hall believes that doing it her way is the reason she has been able to stick with printmaking for nearly 20 years. "Many artists abandon printmaking because it's very technical and time-consuming," she says. "But I've learned to work with it in such a way that it's still spontaneous for me and never tedious."

Hall has been a teacher almost as long as she's been a printmaker, beginning as a painting instructor at CCAD in 1974. She came to Washington University in 1978 as a part-time School of Fine Arts instructor to replace a printmaker who was on a one-year leave of absence. When that teacher decided not to return, Hall was asked to stay, which she did. Her reason for entering the teaching profession is not the

same as that for remaining in it. "I chose to teach because I went through seven years of education beyond high school and had only one female faculty member. I thought the profession needed more women," says Hall. "But I've stayed because I enjoy the interaction with students."

According to Hall, Washington University students stand out from the crowd. "The students I work with are wonderful," she says. "I've been offered other jobs and have worked as a visiting artist at other schools, but I find that students here are incredibly challenging and interesting — making it almost like not working."

However, it's obvious that Hall and her printmaking colleagues have worked hard and persisted in developing

"In addition to being very open, Joan is excited about what she does, and her enthusiasm rubs off on people around her. Even students who seem uninterested start watching, listening and wanting to get involved," Menard says. "That's a real gift."

The kind of respect and admiration that Hall shows her students comes back to her from them. Romi Sloboda, a 1993 School of Fine Arts graduate, says she enjoyed having Hall as a teacher.

"Professor Hall focuses on the individual, taking an interest in the needs and goals of each student," says Sloboda. "I've learned so much from her, but in artistic terms, I'm most grateful to have learned exploration of

media. She really encourages experimentation. Her philosophy of 'Why not, because you won't find out unless you try' has helped me break through a lot of self-imposed boundaries and grow as an artist."

Sloboda also said she was impressed with Hall's ability to juggle many responsibilities. "She sets a good example for students in balancing personal life, teaching and participating in art exhibits. Even though teaching is a full-time occupation for her, she has not allowed her growth as an artist to suffer," Sloboda says. "She does a lot to keep Washington University students up-to-date with what's going on in the local, national and international art communities."

But to Hall, doing all this is really nothing formidable

— simply practicing what she preaches. "I'm a professor and also a professional artist, and it is like having two jobs. But how can I expect my students to juggle social life, academics and making art if I'm not juggling my own personal, professional and teaching life?"

According to friends, Hall has far more energy than a normal human being should. And they marvel at her organizational skills. The combination of these two traits may help explain how she successfully manages so many responsibilities.

Just this summer, "in her spare time," Hall printed 65 4-by-8-foot prints at her St. Louis studio for an artist in California. This feat was on the heels of an exhausting nine-month sabbatical during which she worked as a visiting artist at the University of Hawaii at Manoa, was in residency at Cite Internationale des Arts in Paris, and made paper as a visiting artist at Vallis Clausa, a paper mill in southern France.

Throughout her career, Hall has participated in numerous national and international exhibitions, including ones at Musee D'Art, Lyon, France; Bergstrom-Mahler Museum, Neenah, Wis.; The Brockton Art Museum, Brockton, Mass.; Nordjyllands Kunstmuseum, Alborg, Denmark; two international biennials at the Leopold-Hoesch Museum in Duren, Germany; and an international exhibition of works on paper at the Budapest Museum of Fine Arts in Hungary.

Her work is in a variety of public and private collections, including those of Emerson Electric; Hallmark Corp.; Suwa Municipal Museum, Suwa, Japan; and Southwestern Bell Corp.

She has been featured in many articles and books on printmaking and papermaking and has received awards in both disciplines.

Though her resume crowds five typewritten pages with details of awards, exhibitions, workshops and articles, it doesn't mention the one thing that has brought Hall the greatest amount of professional satisfaction — that she has finally begun to receive recognition in printmaking.

"For so many years I was sort of working in a gray area; I didn't receive recognition as a traditional printmaker, nor was my work considered traditional fiber art," says Hall. "So to begin to receive recognition is rewarding. All the hard work and working the way I wanted to finally seems worth it, although I consider it hysterical that today I'm regarded an 'experimental printmaker' even though I've been doing the same thing since 1974. But that's art."

— Rozanne Kennedy



"Certainly, we teach our students all the techniques of printmaking, but we treat them as young artists — not as students. We guide and encourage them, but we don't expect them to do what we do."

and maintaining one of the best experimental university print departments in the United States. She attributes this, at least in part, to their attitudes about teaching and making art.

"Certainly, we teach our students all the techniques of printmaking, but we treat them as young artists — not as students. We guide and encourage them, but we don't expect them to do what we do. I show them how to make paper, but if they don't care to work with it, they don't have to," says Hall. "We are not of the belief that there's a certain way to make a print and that if you paint or draw on it, it's no longer a print. On the whole, the attitude that a print can be large and somewhat sculptural is not widely held or practiced at other schools. That helps Washington University stand out."

Hall has carried her philosophies and printmaking expertise to many other students and professors around the nation by serving as artist in residence at several universities. While at the University of South Dakota at Vermillion in 1989, Hall worked with Lloyd Menard, professor of art and head of the visiting artist program.

"I think Joan's most important contribution to printmaking and to teaching is her personality," says Menard. "She is one of few in the field who welcomes students and other peers to share her knowledge. Many artists are hesitant to do this for fear of losing something of their personal style."

Calendar

Sept. 9-18



Exhibitions

"New Fine Arts Faculty Exhibit." Through Sept. 12. Bixby Gallery, Bixby Hall. Hours: 10 a.m.-4 p.m. weekdays; 1-5 p.m. weekends.

"Everything Nice: Sugars and Spices in Medical History." Through Oct. 1. Glaser Gallery, School of Medicine Library. Hours: 9 a.m.-9 p.m. weekdays; 1-5 p.m. weekends.

"The Crossing of Borders and the Creation of Worlds: The Art of Howard Jones." Sept. 10-Oct. 3. Gallery of Art, Steinberg Hall. Hours: 10 a.m.-5 p.m. weekdays; 1-5 p.m. weekends.



Films

Thursday, Sept. 9

6:30 and 9 p.m. Filmboard Foreign Series. "Tangos" in Spanish and French with English subtitles. Room 100 Brown Hall. Cost: \$3. **For 24-hour Filmboard hotline, call 935-5983.**

Friday, Sept. 10

7 and 9:30 p.m. Filmboard Feature Series. "Army of Darkness." (Also, same times Sept. 11 and 7 p.m. Sept. 12.) Room 100 Brown Hall. Cost: \$3.

Midnight. Filmboard Midnight Series. "A Clockwork Orange." (Also, midnight Sept. 11 and 9:30 p.m. Sept. 12.) Room 100 Brown Hall. Cost: \$3.

Wednesday, Sept. 15

7 and 9 p.m. Filmboard Foreign Series. "Earth." (Also, same times Sept. 16.) Room 100 Brown Hall. Cost: \$3.



Lectures

Thursday, Sept. 9

Noon. Human Studies Committee lecture. "Research as a Humanistic Endeavor," Rev. Kevin O'Rourke, prof. of medical ethics, director of Center for Health Care Ethics, St. Louis U. Wohl Hospital Bldg. Aud.

Calendar guidelines

Events sponsored by the University — its departments, schools, centers, organizations and its recognized student organizations — are published in the Calendar. All events are free and open to the public, unless otherwise noted.

Calendar submissions should state time, date, place, sponsor, title of event, name of speaker(s) and affiliation, and admission cost. Quality promotional photographs with descriptions are welcome. Send items to Judy Ruhland at Box 1070 (or via fax: 935-4259). Submission forms are available by calling 935-4926.

The deadline for all entries is noon Tuesday one week prior to publication. Late entries will not be printed. The Record is printed every Thursday during the school year, except holidays, and monthly during the summer. If you are uncertain about a deadline, holiday schedule, or any other information, please call 935-4926.

Noon. Genetics lecture. "How Does *C. Elegans* Make Different Muscle Cell Types?" Andrew Fire, prof. of cell biology and physiology. Room 816 McDonnell Medical Sciences Bldg.

4 p.m. Chemistry 35th Kennedy Memorial Lecture. "Computability and the Mind," Roger Penrose, Oxford U. Room 458 Louderman Hall. (Coffee: 3:30 p.m., Millstone Lounge.)

4 p.m. Earth and planetary sciences colloquium. "Characterizing Yucca Mountain as a Nuclear Waste Repository: Can We Answer the 10,000 Year Question?" Jeremy M. Boak, technical analysis branch chief, U.S. Dept. of Energy, Yucca Mountain Project. Room 162 McDonnell Hall.

Friday, Sept. 10

9:15 a.m. Pediatrics Eighth Philip R. Dodge Lecture. "Direct RNA Delivery to the Brain: An Alternate Mode of Neuronal Regulation," Floyd E. Bloom, chair, Dept. of Neuropharmacology, The Scripps Research Institute, La Jolla, Calif. Clopton Aud., 4950 Children's Place.

4 p.m. Chemistry seminar. "A New View of Quantum State Reduction With Applications to Brain Activity," Roger Penrose, Oxford U. Room 311 McMillen Lab.

Monday, Sept. 13

Noon. Society of Professors Emeriti luncheon lecture meeting. "Europe After Maastricht," Paul W. Lutzeler, Rosa May Distinguished Professor of Humanities and director of European Studies. Whittemore House. For more info., call 721-2697.

Noon. Biology lecture. "Bcl-2/Bax: A Rheostat That Regulates Programmed Cell Death," Stanley Korsmeyer, prof. of medicine and pathology. Schwarz Aud., first floor, Maternity Bldg.

Noon. Biology lecture. "The Mother of All Receptors," Alan L. Schwartz, Dept. of Molecular Biology and Pharmacology. Room 3907 South Bldg.

4 p.m. Biology lecture. "Hemisphere Advantage in the Mouse Brain for Recog-

nizing Communication Sounds," Gunter Ehret, prof. of neurobiology, U. of Ulm, Germany. Room 322 Rebstock Hall.

7 p.m. Biology lecture. "Thermodynamics and Kinetics of Folding in Coiled-Coiled Proteins," Al Holtzer, prof. of chemistry. Room 311 McMillen Lab. (Informal dinner: 6:30 p.m.)

8 p.m. English reading. Patricia Henley, candidate for a position in fiction. Hurst Lounge, Room 201 Duncker Hall.

Tuesday, Sept. 14

Noon. Molecular Microbiology seminar. "Molecular Studies on the Virulence of *Listeria Monocytogenes*," Werner Goebel, Dept. of Microbiology, Wurzburg, Germany. Room 775 McDonnell Medical Sciences Bldg.

3 p.m. English reading. Writers colloquium with Patricia Henley, candidate for a position in fiction. Hurst Lounge, Room 201 Duncker Hall.

4 p.m. Assembly Series lecture. Leonard Slatkin, music director and conductor, St. Louis Symphony Orchestra. Graham Chapel.

Wednesday, Sept. 15

8 a.m. Obstetrics and Gynecology Grand Rounds. "Tuberculosis and Pregnancy," Ivana Verraino, Maternal Fetal Medicine Fellow, Clopton Aud., 4950 Children's Place.

Noon. Biology lecture. "Induction of a Cell Cycle Regulator During Apoptosis in Post-Mitotic Neurons," Robert Freeman, assoc. prof. of clinical pediatrics. 928 McDonnell Medical Sciences Bldg.

5 p.m. Cardiology lecture. "Effect of A-V Node Modification Procedures on Dual A-V Nodal Physiology," Bruce D. Lindsay, assoc. prof. of medicine. Room 601A Medical Center Library. (Dinner included.)

Thursday, Sept. 16

Noon. Biology lecture. "Insights Into the Spectrum and Origin of Mutations in the RET Proto-Oncogene Associated With Inherited Medullary Thyroid Cancer," Paul Goodfellow, assoc. prof., Division of Hu-

man Molecular Genetics, Dept. of Surgery. Cori Aud., 4565 McKinley Ave.

1:30 p.m. Biology lecture. "Human T-Lymphotropic Virus Type I-Mediated Lymphocyte Imortalization: Viral Replication and Lymphoproliferation," Jason Kimata, student, Division of Biology and Biomedical Sciences, affiliated with molecular microbiology and micropathogenesis. Room 8841 Clinical Sciences Research Bldg.

4 p.m. Earth and planetary sciences colloquium. "The India-Australia Collision: A New View of Tectonics and the Indian Ocean," D. Charles DeMets, asst. prof., Dept. of Geology and Geophysics, U. of Wisconsin-Madison. Room 162 McDonnell Hall.

Friday, Sept. 17

9:15 a.m. Pediatric Grand Rounds. "Alpha-1-Antitrypsin Deficiency: From Infantile Liver Disease to Pre-senile Dementia," David H. Perlmutter, prof. of pediatrics and cell biology and physiology; director, Division of Gastroenterology and Nutrition, St. Louis Children's Hospital. Clopton Aud., 4950 Children's Place.



Performances

Friday, Sept. 17

8 p.m. "OVATIONS!" event. "Sweet Honey in the Rock." (Also, 8 p.m. Sept. 18.) Edison Theatre. Cost: \$20 for the general public; \$15 for senior citizens and WU faculty and staff; and \$10 for students. For ticket info., call 935-6543.

Sunday, Sept. 19

2 p.m. "ovations! for young people" event. "Sweet Honey in the Rock." Edison Theatre. Cost: \$8. For ticket info., call 935-6543.

Writers Center unifies literary community

St. Louis offers a myriad events, organizations and publications for literary buffs, but until October 1991 a lot of people didn't know that. Since that time, the International Writers Center at Washington University has published a literary calendar of events, revealing St. Louis as a literary stronghold.

The St. Louis Literary Calendar, which is printed monthly, lists the activities of local literary groups, including readings, exhibits, competitions, book signings and open mike nights. It also lists the meetings of literary organizations, gives deadlines for literary journals, runs excerpts from writers' works and highlights literature in general.

Eric Pankey, director of the Writing Program at Washington University, said until the calendar surfaced, he had no idea the city's literary community was so active. "The one thing I found out is what a lively, literary center St. Louis is or has become. Almost every night of the week, you can do something literary-like," he said. "The calendar really does promote literary culture."

Like Pankey, Anne Makeever, executive director of River Styx, said she was unaware of the wealth of literary groups. River Styx, which has published a triennial literary magazine for 15 years, works to foster and nurture an active appreciation for literature and provide quality programs of literature, often in collaboration with allied art forms. "Without the efforts of the International Writers Center we'd have a hard time keeping track of one another," Makeever said. "They've done an excellent and comprehensive job of piecing together and finding out who's who."

The center opened in October 1990 with William Gass as director. Gass,

Ph.D., is a highly regarded writer and the David May Distinguished University Professor in the Humanities at the University. The center was established to serve as a focal point for writing excellence in all disciplines and in all cultures and to bring writers together from around the world. It also serves as a directory for writers and writing programs at the University, in St. Louis, in the United States and around the world.

Lorin Cuoco, associate director of the International Writers Center, spearheads the literary calendar, among other things. She refers to the calendar as the center's "biggest calling card."

"(The calendar) is the most important service we provide," she said. "It's emblematic of the International Writers Center. We want to forge an alliance between the campus and the community. This attempts to unify the bi-state literary constituencies."

Before the calendar was printed, literary groups existed, but no cohesive community was visible. Cuoco said one of her goals was to convince local newspapers to create literary sections in their calendars, giving the events the same rank as theatre, music and art. Two weeks after the literary calendar began circulating, the Riverfront Times created such a category. The St. Louis Post-Dispatch also gives literary events special recognition in its calendar. Both papers are listing more literary events.

"It's created a literary renaissance," Cuoco said. "Once we started publishing, interested persons sought us out. We were amazed at how much literary activity there was in the area."

Cuoco and Mira Tanna, center secretary and a 1991 graduate of the University, gather information from press releases, tap into organizations and attend events to

make sure they're covering the full spectrum. The calendar is circulated at literary events. Originally 1,600 calendars were printed, but higher demand has called for more than 4,000 to be distributed each month to media, arts organizations and individuals.

To announce events or be placed on the mailing list, contact Mira Tanna, International Writers Center, Campus Box 1071, Washington University, St. Louis, Mo. 63130, or call 935-5576. The fax number is 935-4889. Deadline for entries is the 15th of the previous month.

During July and August, the center publishes a literary directory. The center interviews local literary organizations and writes short descriptions of each group. The descriptions give the organizations' history, mission and activities. The center also provides a comprehensive list of local publications.

In addition to the calendar, the center sponsors or co-sponsors various readings, working with University departments, as well as community groups. Every other year, the center hosts an international writers conference on campus. Last October's conference, "The Writer in Politics," drew noted writers from across the world to the University. The proceedings will be published by Southern Illinois University Press. The next conference, "The Writer and Religion," will take place in October 1994.

On Aug. 16, the International Writers Center moved from Busch Hall to its new home in the basement of the former Famous-Barr building in Clayton. The center and the Olin Library Annex are the first tenants of what is called the West Campus. For more information on the center, contact Gass or Cuoco at 935-5576.

— Deborah Parker



Miscellany

Thursday, Sept. 9

11:30 a.m. Town Meeting. "U.S. Foreign Policy: The Challenges That Lie Ahead," sponsored by the U.S. Department of State, the World Affairs Council of St. Louis and various organizations and universities, including WU. Marriott Pavilion Downtown. To register, call 727-9988.

4 p.m. Fulbright Program Application Writing Workshops. Stix International House, 6470 Forsyth Blvd. For more info., call Colette Winn at 935-5477 or Michele Shoresman at 935-5958.

Friday, Sept. 10

7:30 a.m.-5:15 p.m. School of Medicine Seventh Annual Lecture and Hands-on Laboratory Course. "Frontiers in Endosurgery: Advances in Endourological Techniques and Technology." (Continues 8 a.m.-5 p.m. Sept. 11 and 7:15 a.m.-noon Sept. 12.) Program Chairs are Ralph V. Clayman and Elspeth McDougall. 18.5 credit hours, AMA Category 1. Lectures will be held at Cori Aud., 4565 McKinley Ave., on Sept. 10 and 11 and at The Ritz Carlton Hotel, 100 Carondelet Plaza, Clayton, on Sept. 12. Registration at the door. For more info., call Cathy Sweeney at 362-6893.

Noon. Brown Bag Lunch for Women Faculty. Sponsored by women faculty. Remarks by Cynthia Weese, dean of the School of Architecture. Lambert Lounge, Room 303 Mallinckrodt Center. For more info., call 935-5102.

Saturday, Sept. 11

9:30 a.m.-12:30 p.m. Library workshop. Learn how to use a university library, how to research and use specialized reference resources. Olin library. Register in advance. For more info., call 935-6334.

9 a.m.-4:30 p.m. Conference on Gay/Lesbian Issues and the Field of Social Work. Speakers include Ellen Tetlow, Susannah Rose, John Cohen, Gary Hirshberg, Bill Cordes, Margaret Johnson, Marge Van Diggelen, Jim Thomas and Jolene Unnerspall. Participating organizations include ACT UP, PREP, PFLAG, IN OUR TWENTIES, and the St. Louis Effort for AIDS. Sponsored by GLASSWALLS (Gay and Lesbian Association of Student Social Workers) and the George Warren Brown School of Social Work Student Council. Brown Hall. Register at the door. For more info., call 727-6840.

Monday, Sept. 13

7:30 p.m. Economics debate. "The World Economy in Transition: The Role of the U.N." Tom Eagleton, University Professor of Public Affairs, and Murray Weidenbaum, Edward Mallinckrodt University Professor of economics. Sponsored by AIESEC and UNA. May Aud., Simon Hall. Cost: Free with WU ID. For more info., call 935-4600.

Wednesday, Sept. 15

1-3 p.m. "High tea." Sponsored by Woman's Club of Washington University. Open to WU faculty and staff. University

House, 6420 Forsyth Blvd. For more info. and to R.S.V.P., call Pat Sarantites at 862-6615.

Friday, Sept. 17

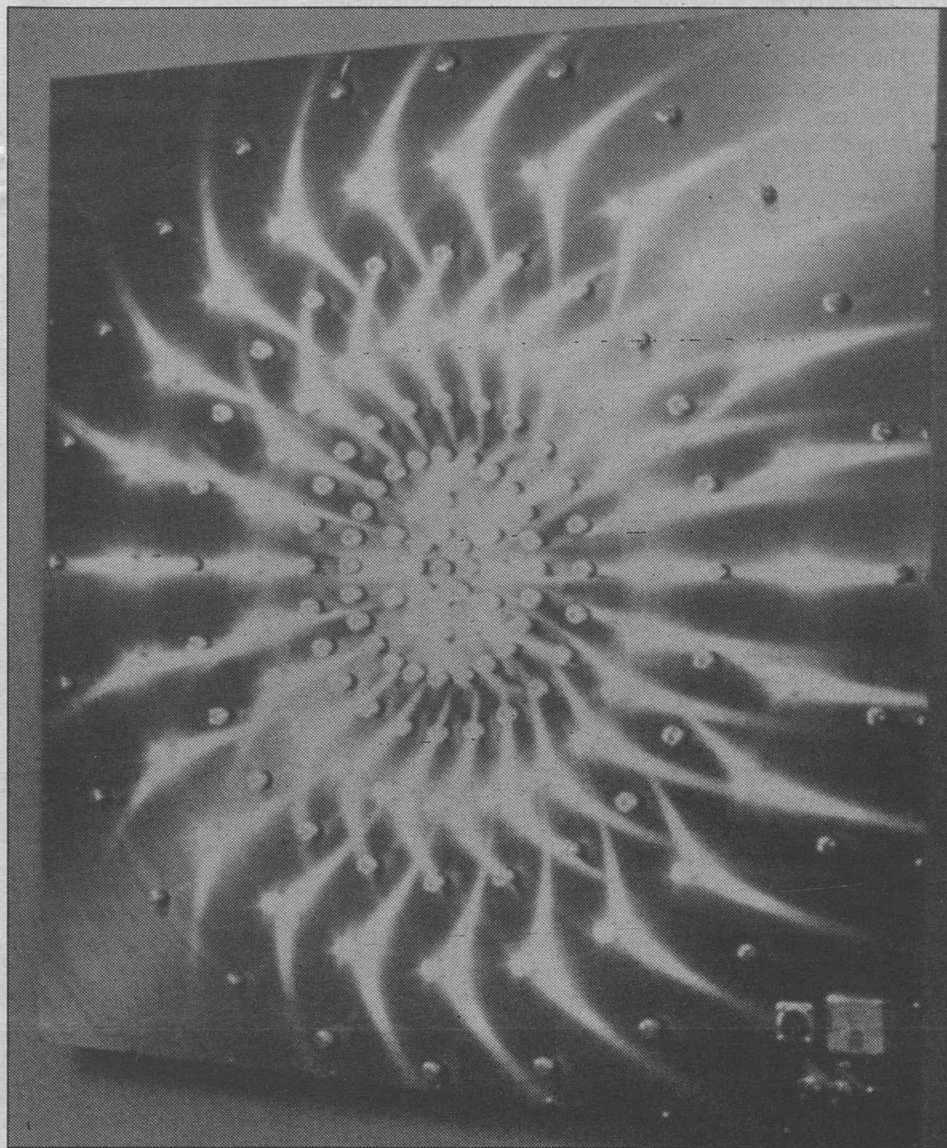
Fall Aerobics course registration deadline. In conjunction with Bodyworks Educational and Training Services. Two six-week courses. Session I starts Sept. 20. Total body workout (low impact), 7-7:45 a.m. Monday and Wednesday; Step Aerobics, 12:10-1 p.m. Tuesday and Thursday. Session II starts Nov. 1. Register for second session by Oct. 18. Register in Athletic Complex Office. Class size limited. Cost: \$42 each session. For more info., call 935-5128.

Saturday, Sept. 18

7:30 a.m.-4:30 p.m. School of Medicine conference. "Suicide and Clinical Practice: An Update for Healthcare Professionals,"

with Dept. of Psychiatry faculty: Raj Nakra, George E. Murphy, Elizabeth P. Pribor, Eugene H. Rubin, Richard D. Wetzell, Sean Yutzy. Guest faculty: Craig Coleman, Western Psychiatry Institute and Clinic, Pittsburgh; Herbert Hendin, New York Medical College, New York; Sheldon Preskorn, Psychiatric Research Institute and Center for Phase I Research, Wichita. Doubletree Conference Center, Chesterfield, Mo. Cost: \$100 for physicians, \$50 for Allied Health Professionals. For more info., call 362-6893.

10 a.m.-1 p.m. University College course. "The Craft of Writing: Grammar and Usage," Tatnall Warner, news editor, St. Louis Post Dispatch, and lecturer in communications and journalism. Learn how to choose words and their forms and where to place them in sentences; review and strengthen basic grammar and writing skills. Cost: \$25. For more info., call 935-6788.



"Skylight" is one of the works on display in the exhibit "The Crossing of Borders and the Creation of Worlds: The Art of Howard Jones." The exhibit, which runs from Sept. 10 through Oct. 31 in the Gallery of Art, features the work of the late Howard Jones, a former professor emeritus of fine arts. His innovative artworks incorporated light and sound.

'Sound takes shape' at Jones exhibit

A retrospective exhibition featuring works of the late Howard Jones opens at the Gallery of Art in Steinberg Hall Sept. 10 and continues through Oct. 31. Jones, a pioneer in the 1960s kinetic art movement, was professor emeritus of fine arts at the time of his death in November 1991. He received widespread recognition for his innovative artworks incorporating light and sound and characterized by movement and energy.

"Jones strived to unify art and technology and make works visual and aural at the same time, believing firmly that sound takes shape," says Joseph Ketner, Gallery of Art director. "He created visually exciting artworks, incorporating sounds that work like musical compositions. These concepts helped him move art from the wall to the viewer's space."

Jones' work evolved over the three decades of his career from active light pieces to sound works that evoke contemporary musical compositions. His works of the 1970s and 1980s featured nature sounds, expressing the artist's environmental concerns. These artworks foreshadowed ecological concerns of the present day.

This exhibition, titled "The Crossing of Borders and the Creation of Worlds: The Art of Howard Jones," will focus on approximately 15 of Jones' most important creations based on the essential relationships between sound, time, space and nature. Pieces from each phase of Jones' artistic career will be on exhibit.

Ketner says that exhibit visitors are likely to have an experience unlike any they've had at an art gallery. "Viewers are sure to be intrigued by how the artworks — clicking, flashing, buzzing, chirping —

arouse the senses and blur the boundaries between what is art and what is everyday life," he says. "This is the dynamic world of Howard Jones."

For the first time, these major works will be brought together and interpreted through a multi-media educational program, including videos, drawings, diagrams, studies and musical scores designed to reintroduce this important artistic figure to the regional and national community.

The exhibit will be further enhanced by a catalog with an essay by Udo Kultermann, Ph.D., renowned art historian and Ruth and Norman Moore Professor of Architecture at the University.

Informal gallery talks, led by Ketner, will be held at 12:10 p.m. Sept. 30 and Oct. 21 to help interpret the exhibit for the public, and a video orientation program will run continuously.

The gallery also has organized participatory musical programs with two composers: Richard O'Donnell, principal percussionist with the Saint Louis Symphony Orchestra and a music instructor at the University; and Michael Murphy, synthesist with the New Music Circle. Their presentations will involve computer-generated music programs activated by the audiences' interruption of laser lights and video cameras, respectively. O'Donnell's program, "Shadow Dancing," will run in Lower Gallery I Oct. 4-10, and Murphy's program, "Democracy," will run in Lower Gallery I Oct. 11-17. The participatory nature of this event will enhance the audience's appreciation of Jones' installations, Ketner says.

For more information about this exhibit, call the Gallery of Art at 935-4523.

Sports

Football

Last Week: Washington 28, Rose-Hulman 7

This Week: at Carnegie Mellon, 1:30 p.m. (EDT) Saturday, Sept. 11, Pittsburgh, Pa.

Current Record: 1-0

The Bears kicked off the 1993 season with a rousing home victory. Junior linebacker Matt Gomric, Belleville, Ill., turned in one of the more remarkable defensive performances in school history. Coming off a record-setting season for tackles, the 5-foot-9 middle linebacker scored two touchdowns against the Engineers. Besides scoring Washington's first two touchdowns on a 36-yard interception return and a 20-yard fumble return, he notched 12 tackles (10 solos), two forced fumbles, one fumble recovery, one interception, two pass deflections and a tackle for a loss.

Senior quarterback Aaron Keen, Cheyenne, Wyo., completed 15 of 29 passes for 246 yards, two touchdowns and no interceptions. Receivers Isaac Mosley, Galesburg, Ill., and Ted Gregory, Elkhorn, Neb., were the recipients of Keen's two touchdown aeriels.

Women's Volleyball

Last Week: Washington 3 (15, 11, 15, 13, 19), Northern Kentucky 2 (7, 15, 10, 15, 17); Washington 3 (15, 15, 16), Wisconsin-Eau Claire 0 (5, 4, 14); Washington 3 (13, 15, 15, 15), Juniata 1 (15, 12, 3, 13); Washington 3 (15, 15, 15), Emory 0 (3, 7, 13); Washington 3 (15, 15, 11, 15), Wisconsin-La Crosse 1 (8, 6, 15, 4); Washington 3 (15, 15, 15), Thomas More 0 (2, 6, 9)

This Week: Washington University National Invitational, Friday-Saturday, Sept. 10-11, Field House

Current Record: 6-0

After surviving an opening-match scare, the Bears rolled to the team title at the Thomas More College Invitational. The Red and Green, ranked first in the NCAA Division III preseason poll, won six matches — including victories over third-ranked Juniata, eighth-ranked Wisconsin-La Crosse, 10th-ranked Thomas More and Division II foe Northern Kentucky.

Selected to the seven-player all-tournament team were all four of the Bears' returning All-Americans — senior middle blocker Amy Sullivan, St. Louis, senior setter Leslie Catlin, Lawrence, Kan.,

junior outside hitter Anne Quenette, Springfield, Ill., and junior middle blocker Amy Albers, Washington, Mo. Albers positioned herself for national player of the week honors by leading the team with 83 kills, 29 blocks and an astounding .514 hitting percentage.

Men's Soccer

Last Week: Washington 2, Aurora 1; Washington 3, Augustana 0

This Week: at University of Missouri, St. Louis, 7:30 p.m. Wednesday, Sept. 8; Maryville University, 7 p.m. Saturday, Sept. 11, Francis Field

Current Record: 2-0

Despite its reputation as an NCAA Division III power, Washington's men's soccer team is off to its best start since 1980 at 2-0. The Bears logged wins against Aurora University and Augustana College. Versus Aurora, freshman Scott Engroff, Mequon, Wis., and sophomore Matt Valentine, Arlington, Texas, scored the two goals, which were both set up by senior back Scott Jones, Cincinnati, Ohio. In the shutout over Augustana, senior sweeper back Kyle Draeger, Columbus, Ind., savored a five-point afternoon, scoring two goals and assisting on the other, which was scored by Valentine.

Women's Soccer

Last Week: Wheaton 1, Washington 0 (2 OT)

This Week: at University of Missouri, St. Louis, 5 p.m. Wednesday, Sept. 8; at DePauw University, 2 p.m. Saturday, Sept. 11, Greencastle, Ind.; versus St. Mary's College (at DePauw), noon Sunday, Sept. 12, Greencastle, Ind.

Current Record: 0-1

Despite riding the wave of a number-13 NCAA Division III preseason ranking, the Bears sank 1-0 in double overtime to unheralded Wheaton College in Monday's opener. Wheaton tallied the only goal of the game one minute and 21 seconds into the second overtime period when freshman Rachel Loring snaked through the tired Bear defense. The Red and Green were slowed by injuries to a number of key personnel, including senior All-America candidate Laura Kilroy, St. Peters, Mo., and freshman sensation Colleen O'Brien, Cincinnati, Ohio.

Weekend in woods teaches MBAs about teamwork

Team building, all the rage among corporate consulting specialists, made its debut in the John M. Olin School of Business Aug. 19 as 40 MBA students journeyed to the Ozark woods near Salem, Mo., for a weekend of orienteering, obstacle courses, rappelling and overnight camping.

Organized by two members of the school's 1994 MBA class, the Olin Professional Development Program was designed to build student confidence and to enhance communication and problem-solving skills. Given the positive feedback from this year's outing, organizers say they'd like to see some version of the program become a standard part of the MBA curriculum.

"That was one of our goals when we started putting the program together," said Paul Carlson, a second-year student and the president of the Graduate Business Association who spearheaded the effort along with Vice President Greg Waldbaum.

"But our primary objective, of course, was focused on ensuring that whoever participated would get something out of it, whether it be working with a team or developing the leadership skills necessary to be competitive in the corporate workforce.

To meet those objectives, Carlson enlisted the help of STREAM, a non-profit, St. Louis-based organization that specializes in outdoor educational adventures. Olin's students, who ranged in age from 23 to 34, began early Friday morning with a series of team-building exercises. Later that afternoon, they set off in small groups to find their way with compass and map to targets scattered in a dense stand of forest.

It was a sticky, hot day in the foothills of the Ozark Mountain Range. Despite stifling temperatures and a ceaseless barrage of mosquitoes and deer flies, students were called upon to complete an array of tasks, both physically and mentally challenging.

"Two days ago, I don't think we would have accomplished this (overcoming obstacles)," said Richard Cordova, a second-year MBA student concentrating in finance. "But now we're starting to think like a team. We're beginning to listen to each other, and we're drawing from our strengths."

It was during the orienteering exercise that many students felt the frustrations of working with an unsuccessful team. Some teams had difficulty finding their targets in the woods.

"During the orienteering it felt like we had four or five different people with different ideas, going in different directions," Cordova said. "We didn't seem to have a lot of respect for processing ideas and building a system."

That began to change on Saturday morning when Cordova began the grueling trek across the high ropes course. Suspended above a 50-foot chasm (but connected to a safety cable above), Cordova crawled across a camel net strapped high between two towering oak trees as teammates cheered his progress. Each team member attempted the high ropes course, although several could not complete it.

Students then made their way through the low ropes course, which placed a premium on working with each member of the team. In one exercise, team members were not allowed to speak to one another.

"Sometimes the best communication is with a subtle eye gesture or by example," said teammate Rob Freund. "I think a lot of what we hear in corporate offices is a lot of hot air. Sometimes it's best to listen for other signals and not necessarily those that are coming from someone's mouth."

Periodic "debriefing sessions" helped the students tie-in the exercises with their corporate experience, and each evening the entire group participated in discussions with leading behavioral consultants, including Olin School faculty members William Bottom, Ph.D., associate professor of organizational behavior, and Laura Poppo, Ph.D., assistant professor of organization and strategy.

"It was a good learning experience for them and for us," said Bottom, who made the trip and worked with students on developing educational components of the program.

"Most of the students that I've talked to have been extremely positive about the trip. It gave them an opportunity to get to know each other and themselves a little better. It was a chance for them to think about themselves more deeply — a time for a little reflection.

"Some of the obstacles that they ran into were really very challenging. There were people who had problems on the course and others in the group really showed their support and encouragement. It's important that we know how to handle being on both sides of that situation.

"It gave them a chance to take risks and to learn the extent that they can depend on other people to help them handle problems," Bottom said. "Students had to work together and integrate their skills with the different skills that other team members have, which is really what leadership is all about."



MBA students recently traveled to the Ozark woods for an outdoor educational adventure that taught leadership and team-building skills.

Washington University retirees look toward pursuing other interests

Pauline Frost spent the last 14 of her 47 working years in the School of Medicine's admissions office, a job she says she will miss.

"I'll especially miss my friends in the department," says Frost. "But I decided it was time to enjoy my other interests and join my husband, who retired in 1987."

Frost was among approximately 40 1992-93 retirees from the Hilltop and Medical campuses honored Aug. 27 at a Whittemore House luncheon. Chancellor William H. Danforth congratulated the "graduating class" and applauded them for their 885 years of combined service to Washington University.

"Though I'm grateful for the changes that have occurred since many of you began — like new buildings and a greater reliance on computers — I hope we are still the same in so many important ways, particularly that we remain supportive of faculty, staff and students, who are the leaders of the next generation," says Danforth. "All of you have been a part of preserving our reputation."

Danforth closed his remarks by wishing all retirees a wonderful retirement. He said he hoped they would maintain an interest in the University and come back to visit.

Of course, wanting to visit and finding the time to do so are two different things, especially for someone like Elsie Glickert, who has so many interests. Glickert, an administrative secretary who retired with 20 years of service in the Department of Sociology is a National Senior Olympics participant and a three-time medalist in badminton. She is involved in University City politics, and she gardens, swims, bicycles and continues to work as a part-time administrative

secretary in the Graduate School of Arts and Sciences. "I'm always looking for a new adventure," says Glickert.

The same goes for Louis Dinzebach, who says he doesn't want to slow down. Even after 18 years of service in Facilities Planning and Management, he plans to continue working part-time at Sverdrup Corp. When he's not working, Dinzebach says he'll devote more time to his hobby of building remote-control boats. His last one, a 4-foot-7-inch replica of the Battleship Missouri, took three years to complete.

Danforth and Gloria W. White, vice chancellor for human resources and affirmative action officer, recognized each of the Hilltop Campus retirees and presented each one with a personalized commemorative walnut plaque.

The Hilltop Campus retirees and their years of service are: Robert Blackburn, 28 years; Bose Boyce, 28 years; Louis Dinzebach, 18 years; Phyllis Dubinsky, 19 years; Rochelle Farb, 29 years; Florence Freeman, 22 years; Patricia Giles, 18 years; Elsie Glickert, 20 years; Laura James, 11 years; Shirley Jones, 30 years; Sally Outten, 13 years; Robert Permuter, 17 years; Lois Pereira, 24 years; Elizabeth Pittaluga, 18 years; Norman Schneider, 24 years; Maia Schultz, 37 years; Lillian Simpson, 21 years; Ernst Smole, 25 years; Doris Suits, 24 years; Ronald Triska, 19 years; and Patricia Whallon, 41 years.

Danforth and William Peck, M.D., executive vice chancellor for medical affairs and dean of the School of Medicine, recognized and presented awards to those retiring from the School of Medicine.

"I see a lot of young people here today. You're all retiring too soon," Peck

quipped. "All kidding aside, it takes great people like you to make a great medical school such as we have. Thanks to all of you for your dedication and extraordinary efforts over the years."

The medical school retirees and their years of service are: Geneva Banks, 29 years; William Bishop, 15 years; Gordon Boyett, 23 years; Pauline Frost, 14 years; Corinne Greenwald, 14 years;

Thelma Isgriggs, 10 years; Carol Jose, 35 years; Sharon Keathly, 30 years; Shirley Lawless, 20 years; Lois Layton, 11 years; Florence Lloyd, 18 years; Dorothy Miller, 15 years; James Monigan, 24 years; Elnora Moore, 25 years; Jesse Murphy, 21 years; Patricia Persons, 29 years; Mary Rogers, 24 years; Dora Teer, 27 years; and Virginia Trantanello, 15 years.

Shuttle now includes Saturday service — from page 1

medical school/DeBaliviere areas also has improved. Fine arts students who are working late at the Lewis Center may now catch the shuttle every 30 minutes from 6 p.m. to 1 a.m. The Delmar Loop/Lewis Center shuttle ran every hour and a half last semester, from 6 p.m. to midnight.

The Clayton/DeMun route now runs every half hour from 6:30 p.m. to 1 a.m., compared with every hour and a half last semester, when it ran from 6:30 to 11 p.m. In addition, the route has been expanded to include the West Campus, downtown Clayton, the Moorlands area, as well as the nearby Schnucks and National grocery stores and the Esquire and Hi-Point theatres. The extended route accommodates staff members who work late and park on the West Campus, and students who don't have cars and are looking for entertainment or grocery stores off campus, Sparks says.

Providing transportation for students to explore the St. Louis community is a continuing focus for Sparks. He says he will be working with promotional directors at the various businesses "to try and encourage them to address our students as potential customers" by providing special discounts, etc.

• The route for the evening medical school shuttle has been increased to every

half hour, rather than every hour and a half. The shuttle, which stops near the MetroLink station near DeBaliviere and travels through the core of the Central West End, runs from 7 p.m. to midnight.

• To avoid delays, the escort shuttle service, which features student drivers, has been changed from an on-call service to a fixed-route service. Two vans, one of them wheelchair accessible, are now stopping at central points on campus to pick up students. Sparks says students will be able to get a ride every 10 minutes from 6 p.m. to 1 a.m. seven nights a week. Emergency blue light phones are currently in place at all but two of the 14 stops on campus. Workers will install the two phones soon.

In order to finance the changes and remain within budget restraints, the Transportation Department has taken over the evening portion of the shuttle route that serves the West Campus. The department formerly contracted Ryder Services to run the route. "The dollars saved from taking the route over from Ryder funded a majority of the shuttle changes," Sparks says. Other ways the department has funded the changes include using student drivers and, when appropriate, using smaller vans instead of buses.

Introducing new faculty members

The Record is running a series profiling new faculty on the Hilltop and Medical campuses.

Daniel Brennan, M.D., assistant professor of medicine in the renal division and director of transplant nephrology at the Washington University Medical Center, comes to the School of Medicine from the University of Nebraska and International Medicine Associates in Omaha, where he was an assistant clinical professor and a nephrologist, respectively. He received his bachelor's degree in chemistry from Cornell College in Mount Vernon, Iowa, in 1981, and his medical degree from the University of Iowa in 1985.

Daniel Coyne, M.D., assistant professor of medicine in the renal division and director of hemodialysis at the medical center, comes to the medical school from the Case Western Reserve School of Medicine and the Cleveland VA Hospital, where he was an assistant professor and a staff physician, respectively. He received his bachelor's degree in chemistry from St. Louis University in 1979 and his medical degree from Case Western in 1983. He completed a nephrology fellowship at the University's School of Medicine.

Don P. Overmyer, assistant professor of fine arts, comes to Washington from Hellmuth, Obata & Kassabaum in St. Louis, where he was a senior designer. Overmyer received his bachelor's degree in graphic design from Indiana University in Bloomington in 1976. He received his master's degree in graphic design from Yale University in 1984.

Andrea L. Winthrop, M.D., assistant professor of surgery in the Division of Pediatric Surgery, comes to the School of Medicine from McMaster University, Hamilton, Ontario, where she was an assistant professor of surgery. She received both her bachelor's degree in biochemistry and her medical degree from Queen's University, Kingston, Ontario, in 1977 and 1981, respectively.

Fulbright grants available to conduct research abroad

The deadline for filing an application to conduct research or study abroad under the Fulbright Program is Sept. 24. Qualified graduate and senior students may apply.

Most of the Fulbright grants provide round-trip transportation, tuition and a stipend for one academic year. Applicants must be U.S. citizens when they apply, hold a bachelor's degree or its equivalent before the beginning date of the grant and be proficient in the host country's language.

The deadline to apply for the 1994-95 awards from the German Academic Exchange Service (DAAD) is Sept. 24 as well. These awards provide a stipend, round-trip air travel to Germany, tuition and a fee waiver at a host German university, as well as a small additional allowance for books and possible language study at a Goethe Institute.

DAAD applicants must be either graduating seniors, graduate students or doctoral candidates who are American citizens. They also must be younger than 32, have a well-defined research project and possess adequate knowledge of the German language.

In addition to the Fulbright and DAAD programs, the deadline for the Fulbright-Hays Doctoral Dissertation Research Abroad Program is Sept. 25. However, contacts with the institutions abroad must be made before that date.

The purpose of the Fulbright-Hays grants is to promote the training of experts in teaching and research.

The program is open to doctoral students in the social science and humanities fields who want to conduct research in a non-Western country and have adequate foreign language skills, among other requirements.

For more information on the programs, call Michele Shoresman, Ph.D., associate director of international studies, at 935-5958.

For The Record

For The Record contains news about a wide variety of faculty, student and staff scholarly and professional activities.

Of note

Helen Donis-Keller, Ph.D., director of the Division of Human Molecular Genetics in the Department of Surgery, has been selected by the Medical College of Pennsylvania to receive the 1994 Marion Spencer Fay National Board Award. Presented annually since 1963, the award recognizes an outstanding woman physician or medical scientist for her contributions to the health care field. The award also encourages other women working in or entering the medical profession. ...

Ericka Hayes, a senior in chemical engineering, participated in the annual Jeopardy! College Championship competition sponsored by the Dodge division of Chrysler Corp. The competition was a three-round elimination tournament in which 15 college students from across the country competed for \$25,000 and a new Dodge Shadow ES Convertible. Hayes, who qualified as a quarterfinalist, placed third in her program and finished in a tie for 10th place in the overall competition. ...

Jane Loevinger, Ph.D., William E. Stuckenberg Professor of Human Values Emerita, received the Bruno Klopfer Distinguished Contribution Award from the Society of Personality Assessment. She was honored for her lifetime contribution to the field of personality measurement. She received the honor during the society's meeting held in San Francisco, Calif. ...

During ceremonies held at the Truman Presidential Library in Independence, Mo., **Jason Kai Ming Lum**, a senior, was awarded a Truman Scholarship by the Harry S. Truman Scholarship Foundation of Washington, D.C. The \$30,000 award is given annually to students who have excelled academically and are committed to public service careers following graduate school. Lum is one of only 86 Truman Scholars recognized in 1993 from more than 1,400 applicants. ...

Jay F. Piccirillo, M.D., assistant professor of otolaryngology and director of the department's clinical outcomes research office, received a Junior Clinical Research Award from the American Cancer Society for \$90,500. As part of the three-year award, he is researching the development of clinical staging systems for cancer patients. ...

As part of the Drury College Alumni Association's Reunion Weekend, **J. Regan Thomas, M.D.**, associate professor of clinical otolaryngology, was honored for career achievement. Thomas, a member of the Drury College board of trustees, graduated from the Springfield, Mo., college in 1968.

Speaking of

Kenneth R. Boschert, D.V.M., associate director of the Division of Comparative Medicine, presented a talk titled "An Overview of Alternatives to Animals in Veterinary Education" at the American Veterinary Medicine Association's annual conference held in Minneapolis, Minn. ...

During the annual meeting of the North American Patristics Society held in Chicago, **J. Patout Burns, Ph.D.**, Thomas and Alberta White Professor of Christian Thought, delivered the presidential address titled "The Atmosphere of Election: Augustinianism as Common Sense." Burns served as the society's vice president from 1990-92 and as president from 1992-93. ...

During an international symposium on Daumier in Context held at the Metropolitan Museum of Art in New York City, **Elizabeth C. Childs, Ph.D.**, assistant professor of art history, delivered a paper titled "Drawing Lessons From Daumier: Seurat, Van Gogh and Gauguin." ...

Vasudha Govindan, a graduate student in electrical engineering, presented a paper titled "N-body Simulations: Load Balancing, Visualization and Performance Evaluation" during the Parallel Virtual Machine User's group meeting held in Knoxville, Tenn. She wrote the paper with **Mark Franklin, Ph.D.**, professor of electrical engineering and of computer science, and **Michael B. Wolfe**, a senior in computer science and electrical engineering. ...

Lynn Stockman Imergoot, assistant athletic director, delivered an address titled "Helen Manley and A. Gwendolyn Drew: A Matter of Style" during the annual convention of the American Alliance for Health, Physical Education, Recreation and Dance's central district held in Omaha, Neb. ...

Enes M. Kanlic, M.D., Ph.D., instructor of orthopedic surgery, presented a paper titled "Intramedullary Nailing of Tibial Fractures" during the American Fracture Association meeting held in St. Louis.

On assignment

Harry L. S. Knopf, M.D., associate professor of clinical ophthalmology, served as a visiting faculty member for ORBIS International in Varna, Bulgaria. While there, he lectured on cataract surgery to Bulgarian ophthalmologists and demonstrated live, televised surgery aboard the ORBIS DC-8 airplane. He also published a paper in the Ophthalmic Practice journal. The paper was titled "The Successful Treatment of Suprachoroidal Expulsive Hemorrhage During Extra Capsular Cataract Extraction." ...

Raj Nakra, M.D., a faculty member in psychiatry, and **Elizabeth Pribor, M.D.**, instructor of psychiatry, served as program chairs for a School of Medicine conference titled "Depression and Related Disorders in Women." Other faculty members who participated in the conference were **Stephen Dinwiddie, M.D.**, assistant professor of psychiatry; **Michael Gast, M.D., Ph.D.**, associate professor of obstetrics and gynecology and director of the Division of Reproductive Endocrinology and Infertility; **James Schreiber, M.D.**, professor and head of obstetrics and gynecology; and **Harold Wolff, M.D.**, associate professor of clinical psychiatry.

To press

Karen L. Brock, Ph.D., assistant professor of art history and archaeology, published an article titled "Seeing Myoe in Tale of Gangyo" in *Currents of Japanese Art History*, a festschrift honoring Tsuji

Nobuo, a professor emeritus at Tokyo University. The article was published in Japanese. ...

Sandra Hale, Ph.D. assistant professor of psychology, and **Astrid F. Fry-Hussey**, a graduate student in psychology, wrote a paper titled "Effects of Practice on Speed of Information Processing in Children and Adults: Age Sensitivity and Age Invariance." The paper is scheduled to be published in the *Developmental Psychology* journal. The authors wrote the paper with alumna Kimberly Jessie.

Etc.

Bonnie Kruger, coordinator of the design/technical area and artist-in-residence in performing arts, designed the costumes for a fully staged Baroque opera of Handel's "Radamisto" for the Göttingen, Germany, Handelfestspiele. Kruger's costumes will appear in a book that will accompany the opera's Harmonia Mundi recording to be released this fall. Her work also will be part of a fall touring exhibit in California. ...

Van McElwee, lecturer in performing arts, curated a show titled "Video Time Shifts" and gave a lecture on video art at The Forum for Contemporary Art in St. Louis. In addition, the forum presented a show titled "Van McElwee Retrospective," which highlighted McElwee's experimental works from 1986-1993. ...

Ben Woods, chemistry library assistant, was acknowledged for his scholarly contributions in several dissertations and other research works. Recently Christine M. Hudson, Ph.D., a May 1993 graduate in chemistry, acknowledged Woods' contributions in her dissertation titled "The Use of Allylsilanes and Vinylsilanes in Anodic Olefin Coupling Reactions."

Guidelines for submitting copy:

Send your full name, complete title, department, phone number, and highest-earned degree, along with a typed description of your noteworthy activity to *For The Record*, c/o Carolyn Sanford, Campus Box 1070. Items must not exceed 75 words. For information, call Carolyn Sanford at 935-5293.

Student wins scholarship from astronauts

William Weeks IV, a senior physics and electrical engineering major, has received a \$7,500 Mercury Seven Scholarship. He is one of 10 science and engineering students from across the country to receive the scholarship, which was established by Mercury Seven — America's first astronauts.

Weeks, who was nominated by Washington University faculty, has researched meteorites and science education projects. His long-term goal is to earn a doctorate and study either plasma physics or solid state research.

The Mercury Seven Foundation was established in 1984 by the six surviving astronauts and Betty Grissom, widow of the

seventh astronaut, Virgil "Gus" Grissom. William Douglas, M.D., the Project Mercury flight surgeon, and Henri Landwirth, an Orlando businessman and long-time friend of the astronauts, also helped establish the foundation. Besides Grissom, the astronauts are Malcolm S. Carpenter, L. Gordon Cooper Jr., John H. Glenn Jr., Walter M. Schirra and Alan B. Shepard Jr. Donald K. "Deke" Slayton died on June 13 of this year.

The goal of the non-profit, tax-exempt, foundation is to strengthen America's position in science and technology by awarding scholarships to juniors, seniors and graduate students who have demonstrated mental ability, self-discipline and high creative drive in the sciences and engineering fields.

Campus Authors

The following is a recent release available at the Campus Bookstore in Mallinckrodt Center on the Hilltop Campus or at the Washington University Medical Bookstore in the Olin Residence Hall. For more information, call 935-5500 (Hilltop Campus) or 362-3240 (Medical School).

The great 19th-century American landscape paintings are the subject of an illustrated volume by **Angela Miller, Ph.D.**, associate professor of art history and archaeology. In *The Empire of the Eye: Landscape Representation and American Cultural Politics, 1825-1875*, Miller surveys American landscape art in light of its political, institutional and cultural history from the 1820s through the post-Civil War era. She shows how landscape paintings, beyond reflecting the beauty and the power of nature, served as a medium through which disquieting questions concerning the future of the new republic could be raised symbolically. Making use of a wide array of sources, including diaries, letters, travel writings, criticism and essays, Miller illuminates the meaning of landscape images for 19th-century viewers. She reassesses the ideological influence of Thomas Cole on successive generations of artists and reinterprets the new types of national landscape that emerged among New York-based painters beginning in the 1840s. (Cornell University Press, Ithaca and London)



Opportunities & personnel news

Hilltop Campus

The following is a list of positions available on the Hilltop Campus. Information regarding these and other positions may be obtained in the Office of Human Resources, Room 126 North Brookings Hall, or by calling 935-5990.

Assistant Accountant

940030. *Engineering Accounting*. Requirements: 18 hours of college business courses, including six hours of accounting coursework; ability to use/willing to be trained to use mainframe computer, including financial on-line system (FIS, SIS, ELIG, FOCUS); ability to use personal computer, including spreadsheet software (WordPerfect); confidence in verbal ability; ability to deal effectively with University personnel; typing 45 wpm with accuracy. Clerical tests and three letters of recommendation required.

Data Processing Assistant I

940032. *University Registrar's Office*. Requirements: Some college, bachelor's degree preferred; prior experience with computers, data processing and an interest in working with automated systems; typing with accuracy. Clerical tests and three letters of recommendation required.

Librarian, Part-time

940036. *School of Social Work*. Requirements: MLS; experience with reference sources (social work); knowledge of on-line searching, preferably RRS and PSYLIT on Silverplatter. Resume and three letters of recommendation required.

Coordinator of Prospect Management

940042. *Major Gifts and Capital Projects*. Requirements: Bachelor's degree; knowledge of university-type screening and rating programs, major prospect review programs, prospect tracking systems, prospect management systems, prospect research techniques; outstanding computer skills and data base management; typing 60 wpm with accuracy. Clerical tests and three letters of recommendation required.

Departmental Secretary

940044. *Major Gifts and Capital Projects*. Requirements: Specialized secretarial and business training; three years of general office experience; ability to work well within the office environment and relate easily with others; willingness to learn the role of the Development Office and the mission of Washington University; a spirit of teamwork and a willingness to assist others as needed; typing 50 wpm with accuracy. Clerical tests and three letters of recommendation required.

Library Technical Assistant

940045. *Olin Library*. Requirements: Ability to work with the public in a helpful and cooperative manner; two years of college or equivalent experience, degree preferred; knowledge of serial publications through library experience or course work desirable; ability to work with details in an organized way; ability to work with material and information in various languages; study of a Western foreign language desirable; ability to train and supervise student assistants, following procedures; typing 30 wpm with accuracy; good communication skills; legible handwriting; physical stamina; ability to work irregular hours — some evenings and weekends required.

Receptionist/Clerical Assistant

940050. *Biology*. Requirements: High school graduate; must possess strong interpersonal skills and maintain friendly courteous manner under pressure; ability to prioritize and organize tasks and work on multiple tasks simultaneously; ability to maintain accurate and orderly records; present professional manner and appearance and maintain neat work areas; handle frequent student requests, multiple phone calls and be timely and dependable; be flexible and have ability to change and adapt to new procedures; be a good team member; typing 40 wpm with accuracy. Clerical tests and three letters of recommendation required.

Coordinator, Gift Acknowledgements

940052. *Development Services*. Requirements: Associate's degree; good writing skills, letter composition necessary; typing 60 wpm with accuracy. Clerical tests and three letters of recommendation required.

Special Projects Assistant

940054. *Olin Library*. Requirements: Two years of college-level study or equivalent work experience necessary; ability to work with details in an organized and accurate manner; physical stamina; typing 35 wpm with accuracy; ability to work in a rapidly changing environment under deadlines; library work experience desirable; computer word processing and data entry skills desirable. Clerical tests and three letters of recommendation required.

Dispatcher/Clerk

940055. *Campus Police*. Requirements: High school graduate; typing 40 wpm with accuracy; must be able to work shifts and weekends and holidays when scheduled; must like working with people in service capacity; cooperative attitude essential; ability to organize time and work under pressure in emergency situations; must be dependable and conscientious; knowledge of computer usage helpful. Clerical tests and three letters of recommendation required.

News Writer/Assistant Record Editor

940056. *Public Affairs*. Requirements: Journalism or communications degree preferred; two years professional journalism experience preferred. Resume and three letters of recommendation required.

Coordinator of Study Abroad Office

940057. *Arts and Sciences*. Requirements: Bachelor's degree, master's degree preferred; excellent interpersonal and writing skills; some knowledge of word processing and computer spreadsheet programs; strong organizational abilities; able to work independently; energetic and enthusiastic approach; willing/able to work some evenings and/or weekends to participate in student meetings; experience working with college-level students; supervision of employees; travel or study abroad. Resume and three letters of recommendation required.

Assistant to the Dean

940060. *Undergraduate Admission*. Requirements: Three years of college, bachelor's degree preferred; typing 60 wpm with accuracy. Duties: Keep dean's calendar — both hard copy and electronic; answer dean's calls; do on-line payroll and personnel functions; type correspondence; open dean's mail; order

supplies; do miscellaneous word processing for other staff members as needed. Clerical tests and three letters of recommendation required.

Publications Editor

940062. *Engineering Accounting*. Requirements: Bachelor's degree; solid experience in writing, editing and overseeing production of numerous publications; excellent coordination and interpersonal skills; knowledge of design/photography highly desirable. Resume and three letters of recommendation required.

Medical Campus

The following is a partial list of positions available at the School of Medicine. Employees who are interested in submitting a transfer request should contact the Human Resources Department of the medical school at 362-4920 to request an application. External candidates may call 362-7195 for information regarding application procedures or may submit a resume to the Human Resources office located at 4480 Clayton Ave., Campus Box 8002, St. Louis, Mo. 63110. Please note that the medical school does not disclose salary information for vacancies, and the office strongly discourages inquiries to departments other than Human Resources.

Coding Specialist - Diagnostic/Medical

930712-R. *Internal Medicine*. Schedule: Hours 10 p.m.-7 a.m., including some weekends. Requirements: High school graduate or equivalent; two years related CPT and ICD-9 coding experience preferred; accredited records technician or individual with similar clinical training or skill preferred.

Phlebotomist

930863-R. *Pediatrics*. Schedule: Part time, 16 hours per week; 6 a.m.-2:30 p.m. Saturdays and Sundays and rotating holidays. Requirement: pediatric phlebotomy experience in venous and capillary collections. Students welcome to apply.

Project Assistant

930917-R. *Internal Medicine*. Requirements: Bachelor's degree in business administration or related field with three years clinical training/experience with medical records coding; strong communication, interpersonal and analytical skills.

Medical Technologist I

930918-R. *Pediatrics*. Schedule: Part time, 24 hours per week, three weekends per month, one night per week and some holidays. Requirements: Bachelor's degree with a minimum of one year clinical lab experience. Some exposure to biohazardous materials.

Medical Research Technician

930981-R. *Genetics*. Requirements: Bachelor's degree with background in chemistry or biology; ability to learn molecular biology techniques, including PCR.

Medical Transcriptionist

940082-R. *Internal Medicine*. Schedule: Part time, 0-based hours. Requirements: High school graduate or equivalent with knowledge of medical terminology; typing 60 wpm with excellent dictaphone skills.

Medical Research Technician

940089-R. *Biochemistry*. Schedule: Part time, 22.5 hours per week, days negotiable. Requirements: Bachelor's degree; ability to perform biochemistry and molecular biology experiments under guidelines from supervisor; ability to apply theoretical background to concrete research situations.

Grant Assistant II

940092-R. *Obstetrics-Gynecology*. Requirements: High school graduate or equivalent; one to two years grant experience desired; experience using FIS.

Animal Caretaker

940099-R. *Comparative Medicine*. Tyson Research Center. Schedule: Full time, including some weekends, holidays and overtime. Requirements: High school graduate or equivalent; must be able to work with and handle animals; must have valid driver's license and ability to drive truck or van; should have manual skills and dexterity and be able to lift up to 50 lbs.

Clerk Typist I

940118-R. *Human Studies*. Schedule: Part time, 20 hours per week, four to five hours per day. Requirements: High school graduate or equivalent; excellent spelling, punctuation and grammar skills as well as two years related work experience; typing 45 wpm and experience on word processor.

Medical Research Technician

940135-R. *Ophthalmology*. Requirements: Bachelor's degree in a scientific field with some experience (could be course work) in research environment with tissue culture. Histology experience helpful.

Programmer Analyst III

940137-R. *Finance Office*. Requirements: Bachelor's degree in computing or related field with five to seven years programming experience in a nonprofit organization; must have expertise in business systems analysis and design; strong interpersonal communication skills; must prioritize, organize, initiate and follow through on projects.

Assistant Supervisor, Clinical Lab

940166-R. *Pediatrics*. Schedule: 10-hour shifts, including one weekend a month and some holidays. Requirements: Bachelor's degree in a lab-related field, MT(ASCP) or equivalent certification; four years experience working in a clinical lab setting with some generalist experience (micro, hem, chem).

Professional Rater II

940182-R. *Psychiatry*. Requirements: Master's degree; writing, editing and data analysis skills. Will be involved in multi-research projects dealing with drug and alcohol use and HIV risk behavior.

Secretary II

940185-R. *Ophthalmology*. Schedule: Part time, 20 hours per week, flexible hours, Monday-Friday. Requirements: High school graduate or equivalent; experience with Lotus 1-2-3 and Microsoft; ability to interact with patients and staff; typing 50 wpm.